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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/517,648	ATTWATER ET AL.
	Examiner	Art Unit	
	Natalie Lennox	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _13 December 2004_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-54_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) _31-40 and 53_ is/are allowed.

6) ☒ Claim(s) _1-30, 35-52 and 54_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _13 December 2004_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _10/17/2005_.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities: On page 14

line 13 of applicant's disclosure, the "finalRepair" telno buffer from Fig. 2 is referred to

with numeral 224. Number 224 has already been used to refer to the

"immediateRepair" block under (e). According to the drawing the block that refers to the

"finalRepair" is labeled 244. Appropriate correction is required.

Information Disclosure Statement

2.   The information disclosure statement filed October 17, 2005 fails to comply with

37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance,

as it is presently understood by the individual designated in 37 CFR 1.56(c) most

knowledgeable about the content of the information, of each patent listed that is not in

the English language. It has been placed in the application file, but the information

referred to therein has not been considered.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

4.   Claim 50 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. Regarding claim 50, the processes claimed do

not produce a useful, tangible and concrete result. The processes have no practical

processes have no practical application since they are making a comparison and determination whether the "immediately following part can be interpreted as a correction or partial correction of said immediately preceding part," however, they are not making use of this determination for producing a useful, concrete, or tangible result. An example of a useful, concrete, and tangible result would be performing the correction or partial correction after the determination is made.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.   Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 4, the use of the term "it" renders the claim indefinite because it is a broad term that can represent any object, therefore it is unclear to what object it is specifically referring to. For purposes of examination, "it" is interpreted as referring to "the later portion of the buffer."

7.   Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 11, it is unclear what the applicant refers to when citing that an "alignment precedes the buffer contents." There is no description in the disclosure towards what "preceding [the] buffer contents" means. For examining

purposes, examiner interprets "any particular alignment precedes the buffer contents" to

refer to any particular alignment where a portion of the user's coded representation is

different from the contents of the buffer.

8.   Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Regarding claim 12, it is unclear what the applicant refers to

when citing a "particular alignment [that] follows the buffer contents." There is no

description in the disclosure towards what "following the buffer contents" means.

Therefore, examiner interprets for purposes of examination "following the buffer

contents" to refer to an alignment in which the buffer contents and a portion of the user's

coded response is the same.

9.   Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Regarding claim 14, it is unclear whether the "alignment

corresponding to a pure continuation of the part of the buffer contents already uttered by

the speech generation means" refers to the contents of the buffer not yet uttered by the

speech generation means or to the contents of the buffer which have already been

uttered by the speech generation means. The fact that the claim cites "a pure

continuation" suggests that it is referring to the contents not yet offered to the user.

Further, it is unclear to exactly what position the "such position" where the coded

response is to be entered, is referring to. If the alignment corresponding to a pure continuation refers to the contents of the buffer which have not yet been offered to the user, then it is assumed that this entry point would be before the alignment corresponding to where the alignment with the greatest similarity begins. However, the second part of claim 14, cites comparing "a part of the buffer contents immediately following a marked position with a part immediately preceding the same marked position to determine whether or not said immediately following part can be interpreted as a correction or partial correction of said immediately preceding part." This limitation suggests that the comparison is being made between the part of the buffer which was already uttered by the speech generation means with the new entered coded response in order to determine correction or partial correction. However, if the greatest similarity was present in the "pure continuation of the part of the buffer contents already uttered by the speech generation means" (contents of the buffer not yet offered by the speech generation means), which is interpreted as being the part of the buffer contents containing the error to be corrected, then it is unclear why the comparison is being made with the part of the buffer which is supposed to be correct. Therefore the determination of the correction being whole or partial, based on just a portion of the buffer which is supposed to be correct is not logical. Further, if the error was present in the part of the buffer which is a "pure continuation of the part of the buffer contents already uttered by the speech generation means" (contents of the buffer not yet offered by the speech generation means), then it could be assumed that is it that part of the buffer which needs correction, therefore it would always be a partial correction. It the

correction could be a whole correction, then the entry position for the coded response, would make more sense to be after the "alignment corresponding to a pure continuation of the part of the buffer contents already uttered by the speech generation means.

10.   Claims 18, and 20-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 recites the limitations "previous coded representation" and "recognized coded representation," in page 9, step (b2). There is insufficient antecedent basis for this limitation in the claim. Claim 18 step (a) claims receiving a coded representation, step (b1) claims generating a coded representation, and step (b2) claims updating the previous coded representation with the recognized coded representation, however, there is no such "**previous** coded representation" or "**recognized** coded representation" claimed. Thus it is unclear to exactly which coded representations the "previous" and "recognized" are referring to. Claim 25, presents the same issues as claim 18 regarding the "**recognized** coded representation."

11.   Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 recites the limitation "updated representation" in line 5, step (c). There is insufficient antecedent basis for this limitation in the claim. Also, it is unclear in step (b), when or where the "input having a correcting function" is inputted.

If the speaker only provides an utterance, then is this "input having a correcting function" part of the utterance? Further, if the "updated representation" of step (c) is referring to the "input having a correcting function," how can it be categorized as an updated representation, when it is still part of the original coded representation generated from the speaker's utterance?

12.   Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 27 recites the limitation "current coded representation" in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 27 is dependent from claim 18, which does not mention a **current** coded representation.

13.   Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 36 cites "generating for each selected portion a first marker indicative of the position thereof within the stored coded representation," however, it is not clear where exactly the position thereof is. It might refer to the position where the selected portion starts or ends.

14.   Claim 41 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 41 recites the limitation "for the or each second marker"

in line 2. There is insufficient antecedent basis for this limitation in the claim. The

second marker cited in line 2 appears to be referring to the second marker cited or

introduced further in the claim in line 8.

Claim Rejections - 35 USC § 102

15.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16.   Claims 1-3, 5, and 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated

by Gamm et al. (US Patent 6,078,887).

As per claim 1, Gamm et al. teach an automated dialogue apparatus comprising:

a buffer (10) for storing coded representations (Col. 1, lines 43-48, Col. 3, line 66

to Col. 4, line 1, and Col. 3, lines 18-31. The buffer is inherently present in the system

given that the system must have use of a memory or buffer in order to be able to keep

or store the code words that represent the user's numeric character sequence,

necessary for comparing the second character sequence with the first character

sequence.);

speech generation means (6) operable to generate a speech signal from the

coded representation for confirmation by a user (Col. 4, lines 3-8);

speech recognition means (2) operable to recognise speech received from the

user and generate a coded representation of thereof (Col. 3, lines 56-59 and Col. 3 line

66 to Col. 4, line 1);

means (5) operable to compare the coded representation from the recogniser of a response from the user with the contents of the buffer to determine, for each of a plurality of different alignments between the coded response and the buffer contents, a respective similarity measure, wherein at least some of said comparisons involve comparing only a leading portion of the coded response with a part of the buffer contents already uttered by the speech generation means (Col. 1, lines 43-59, the determination of which sequence has the most matches is interpreted as the similarity measure); and

means (5) for replacing at least part of the buffer contents with at least part of said recognised response, in accordance with the alignment having the similarity measure indicative of the greatest similarity (Col. 1, lines 43-59).

As per claim 2, Gamm et al. teach an apparatus according to claim 1, including an input buffer operable to hold said coded representation from the recogniser of a response from the user whilst said comparison is performed (Col. 1, lines 43-48, Col. 3, line 66 to Col. 4, line 1, and Col. 3, lines 18-31. The buffer is inherently present in the system given that the system must have use of a memory or buffer in order to be able to keep or store the code words that represent the user's numeric character sequence, necessary for comparing the second character sequence with the first character sequence.).

As per claim 3, Gamm et al. teach an apparatus according to claim 1, arranged so that said coded representation from the recogniser of a response from the user is entered into the buffer prior to said comparison, and the replacing means is operable thereafter to adjust its position in the buffer (Col. 2, lines 14-31 and Col. 6, lines 47-54).

As per claim 5, Gamm et al. teach an apparatus according to claim 1 including means operable to record status information defining the buffer contents as confirmed, offered for confirmation but not confirmed, and yet to be offered for confirmation (Fig. 2 and Col. 4, lines 22-26, lines 41-45, and lines 55-59. It is noted that Gamm does not specifically cite recording the status, however, it is inherent that in the process as shown and described in the figure and the disclosure, that during the steps 7 and 8 of figure 2, the system has not yet offered any buffer contents to the user, and in steps 9 and 10, the contents are offered but are not confirmed until step 11, where the user's reply is tested for confirmation (confirmed status). In step 11, if user's reply is "yes," the contents are confirmed and the process terminates, if not then it proceeds to further corrections. In order for the system to move from one step to the other there has to be a flag or some indication that the step has been completed in order to proceed to the next step.).

As per claim 9, Gamm et al. teach an apparatus according to claim 5 in which the similarity measure is a function of (a) differences between the coded representation of the user's response and the contents of the buffer and (b) the status of those

contents (Col. 1, lines 46-52, where determination of which sequence has the most

matches is interpreted as the similarity measure, the second number represents the

user's response and the first number represents the contents of the buffer. The fact that

the user's response is being compared with the contents of the buffer is sufficient for

determining that the status of the contents of the buffer is not yet been confirmed but

have already been offered to the user, therefore the function of the status of the

contents is inherent in the whole process of determining the similarity.).

As per claim 10, Gamm et al. teach an apparatus according to claim 5 in which

the similarity measure is a function also of the alignment or otherwise of phrasal

boundaries in the representations being compared (Col. 1, lines 46-55).

As per claim 11, Gamm et al. teach an apparatus according to claim 1 in which a

portion of the coded representation of the user's response that in any particular

alignment precedes the buffer contents is deemed to be different (Col. 6, lines 16-19).

As per claim 12, Gamm et al. teach an apparatus according to claim 1 in which a

portion of the coded representation of the user's response that in any particular

alignment follows the buffer contents does not contribute to the similarity measure (Col.

2, lines 28-31).

17.   Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Gould (US

Patent 5,794,189).

As per claim 19, Gould teaches a method of speech recognition comprising

(a) recognising an utterance from a speaker to generate a coded representation thereof (Col. 2, lines 33-36, where the recognized speech represents the coded representation);

(b) detecting in the utterance a position that is followed by input having a correcting function and marking this position within the coded representation (Col. 4, lines 17-36. The correcting function is represented by the word "oops" in the utterance which also represents the position where the comparison between the correction (utterance portion after the "oops") and the recently misrecognized utterance.); and

(c) comparing a part of the updated representation immediately following the marked position with a part immediately preceding the same marked position to determine whether or not said immediately following part can be interpreted as a correction or partial correction of said immediately preceding part (Col. 4, lines 27-36).

18.   Claims 42, 48, and 49 are rejected under 35 U.S.C. 102(e) as being anticipated by Ciurpita et al. (US 2003/0023439).

As per claim 42, Ciurpita et al. teach an automated dialogue apparatus comprising speech generation means operable to generate a speech signal from a coded representation for confirmation by a user, characterised by means operable in dependence on the length of the coded representation to divide the coded representation into at least two portions, to supply a first portion to the speech generation means and to await a response from the user before supplying any further

portion to the speech generation means (Paragraph [0050], lines 1-6, and paragraph

[0041], lines 1-2 and 9-17, where the string is a long digit string. Also paragraph [0036],

first two lines, where all the subgroups (recognition results), must be confirmed).

As per claim 48, Ciurpita et al. teach an apparatus according to claim 42

including speech recognition means operable to recognise speech received from the

user and generate the coded representation therefrom (Paragraph [0019], lines 4-12).

As per claim 49, Ciurpita et al. teach an automated dialogue apparatus

comprising:

a buffer (10) for storing coded representations (Table 2, under paragraph [0056],

"buff[BufSize] ---- Array to store recognition results);

speech recognition means (2) operable to recognise speech received from the

user, including detecting phrasal boundaries in said input speech, and to store in the

buffer a coded representation of the recognised speech and markers indicative of the

positions of said phrasal boundaries (Paragraph [0019], lines 4-12, and paragraph

[0057], lines 8-10);

speech generation means (6) operable to generate a speech signal from the

coded representation for confirmation by a user (Paragraph [0036], lines 1-4 and

paragraph [0063], lines 1-4);

control means operable in response to the phrase boundary markers to divide

the coded representation into at least two portions, to supply a first portion to the

speech generation means for a response from the user before supplying any further

portion to the speech generation means (Paragraph [0036], lines 1-4, where all

subgroups must be confirmed.).

Claim Rejections - 35 USC § 103

19.   Claims 4, 6-8, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Gamm et al. (US Patent 6,078,887) as applied to claims 1 and 5 above, and further

in view of Ciurpita et al. (US 2003/0023439).

As per claim 4, Gamm et al. teach an automated dialogue apparatus according

to claim 1, wherein at least some of said comparisons involve comparing the coded

response with a concatenation of a part of the buffer contents already uttered by the

speech generation means and the portion which, in the buffer, immediately follows it

(Col. 1, lines 43-59, where the coded response is compared with the complete first

sequence).

However, Gamm et al. does not specifically mention further comprising means

operable to divide the buffer contents into at least two portions, to supply an earlier

portion to the speech generation means and to await a response from the user before

supplying a later portion to the speech generation means.

Conversely, Ciurpita et al. teach means operable to divide the buffer contents

into at least two portions, to supply an earlier portion to the speech generation means

and to await a response from the user before supplying a later portion to the speech

generation means (Paragraph [0050], lines 1-6, and paragraph [0041], lines 9-17. Also

paragraph [0036], first two lines, where all the subgroups (recognition results), must be confirmed).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of means operable to divide the buffer contents into at least two portions, to supply an earlier portion to the speech generation means and to await a response from the user before supplying a later portion to the speech generation means as taught by Ciurpita et al. for Gamm et al.'s apparatus because Ciurpita's system saves the recognition results as a sequence of sub-digits rather than concatenating all results into a single sequence in order to allow each sub-sequence to be subsequently rejected or confirmed (paragraph [0050]), also recognition results will be less error-prone because smaller digit-strings can be more accurately recognized than longer strings (paragraph [0040]).

As per claim 6, Gamm et al. teach an apparatus according to claim 5, but does not specifically mention in which the status information also includes indications of the condition that the respective coded representation has been corrected following non-confirmatory input from the user.

However, Ciurpita et al. teach the status information also includes indications of the condition that the respective coded representation has been corrected following non-confirmatory input from the user (Paragraph [0029], also Table 1's first example, and paragraph [0041], lines 1-3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of the status information also includes indications of the condition that the respective coded representation has been corrected following non-confirmatory input from the user as taught by Ciurpita et al. for Gamm et al.'s apparatus because by allowing non-confirmatory input, for example, no response after some predetermined duration (as taught by Ciurpita), may prevent the system from timing out and rejecting a correct result.

As per claim 7, Gamm et al. teach an apparatus according to claim 5, but does not specifically mention in which the status information is recorded by means of pointers indicating boundary positions within the buffer between representations having respective different status.

However, Ciurpita et al. teach the status information is recorded by means of pointers indicating boundary positions within the buffer between representations having respective different status (Paragraphs [0029] and [0041], where the confirmation or non-confirmatory input of every subgroup suggests that different parts of the buffer have different status, where subgroups not yet presented to the user have not the same status as the already presented).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of pointers indicating boundary positions within the buffer between representations having respective different status as taught by Ciurpita et al. for Gamm et al.'s apparatus because regardless of the number of

subgroups or utterances, all recognition results must be confirmed (paragraph [0036], lines 1-4), therefore keeping record of the different status helps the system to keep track of what has been confirmed and what still needs confirmation.

As per claim 8, Gamm et al. teach an apparatus according to claim 5, but does not specifically mention in which the buffer has a plurality of locations each for containing a coded representation, and for each location a status field for storing the associated status.

However, Ciurpita et al. teach the buffer having a plurality of locations each for containing a coded representation, and for each location a status field for storing the associated status (Paragraph [0050], lines 1-6, and paragraph [0036], lines 1-5. It is noted that Ciurpita does not specifically cite the buffer containing a status field for each coded representation location (subgroup), however, the fact that all recognition results (subgroups) need to be confirmed, suggests that there is some kind of status associated with each subgroup as it is being fed back to the user.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of the buffer having a plurality of locations each for containing a coded representation, and for each location a status field for storing the associated status as taught by Ciurpita et al. for Gamm et al.'s apparatus because regardless of the number of subgroups or utterances, all recognition results must be confirmed (paragraph [0036], lines 1-4), therefore keeping record of the

different status helps the system to keep track of what has been confirmed and what still
needs confirmation.

As per claim 17, Gamm et al. teach an automated dialogue apparatus according
to claim 1, but does not specifically mention including means operable to recognise a
spoken response containing an indication of non-confirmation and in response thereto
to suppress selection of an alignment corresponding to a pure continuation of the part of
the buffer contents already uttered by the speech generation means.

However, Ciurpita et al. teach including means operable to recognise a spoken
response containing an indication of non-confirmation and in response thereto to
suppress selection of an alignment corresponding to a pure continuation of the part of
the buffer contents already uttered by the speech generation means (Paragraph [0032],
also paragraph [0038], lines 6-8).

It would have been obvious to one having ordinary skill in the art at the time the
invention was made to have used the feature of including means operable to recognise
a spoken response containing an indication of non-confirmation and in response thereto
to suppress selection of an alignment corresponding to a pure continuation of the part of
the buffer contents already uttered by the speech generation means as taught by
Ciurpita et al. for Gamm et al.'s apparatus because the user can immediately reject and
correct a misspoken word within the same utterance, without needing to wait for
feedback (Paragraph [0038], lines 10-12).

20.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gamm

et al. (US Patent 6,078,887) as applied to claim 1 above, and further in view of Vysotsky

(US Patent 5,664,058).

As per claim 13, Gamm et al. teach an apparatus according to claim 1, but does

not specifically mention in which the comparing means is operable in accordance with a

dynamic programming algorithm.

However, Vysotsky teaches the comparing means is operable in accordance with

a dynamic programming algorithm (Col. 6, lines 39-41. For this case the token is

interpreted as referring to the coded representation and the previously formed voice

message is interpreted to refer to the contents of the buffer.).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have used the feature of the comparing means is operable in

accordance with a dynamic programming algorithm as taught by Vysotsky for Gamm et

al.'s apparatus because the use of a dynamic programming algorithm for comparisons

provides a recognition score or pattern matching score, which is useful for determining

the closeness factor of the two subjects being compared.

21.   Claims 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ciurpita et al. (US 2003/0023439) in view of Irvin et al. (US 2002/0072917).

As per claim 43, Ciurpita et al. teach an apparatus according to claim 42, but do

not specifically mention including means for recognising predetermined patterns in the

coded representation and wherein upon such recognition one of the portions is determined by reference to a recognised pattern.

However, Irvin et al. teach

means for recognising predetermined patterns in the coded representation and wherein upon such recognition one of the portions is determined by reference to a recognised pattern (410 from Fig. 4 and paragraph [0021], lines 8-14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of means for recognising predetermined patterns in the coded representation and wherein upon such recognition one of the portions is determined by reference to a recognised pattern as taught by Irvin et al. for Ciurpita et al.'s apparatus because Irvin et al. recognizes predetermined patterns such as area codes, exchange codes, or country codes in a telephone number, according to their position within the number, in order to look them up in a look-up table and determine their corresponding geographical location (Paragraph [0021], lines 10-13).

As per claim 44, Ciurpita et al. teach an automated dialogue apparatus comprising:

speech generation means operable to generate a speech signal from a coded representation for confirmation by a user (Paragraph [0036], lines 1-5); and

means operable to divide the coded representation into at least two portions, to supply a first portion to the speech generation means and to await a response from the user before supplying any further portion to the speech generation means (Paragraph

[0050], lines 1-6, and paragraph [0041], lines 1-2 and 9-17, where the string is a long

digit string. Also paragraph [0036], first two lines, where all the subgroups (recognition

results), must be confirmed).

However, Ciurpita et al. do not specifically mention

characterised by means for recognising predetermined patterns in the coded

representation and wherein upon such recognition one of the portions is determined by

reference to a recognised pattern.

Conversely, Irvin et al. teach

characterised by means for recognising predetermined patterns in the coded

representation and wherein upon such recognition one of the portions is determined by

reference to a recognised pattern (410 from Fig. 4 and paragraph [0021], lines 8-14).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have used the feature of means for recognising predetermined

patterns in the coded representation and wherein upon such recognition one of the

portions is determined by reference to a recognised pattern as taught by Irvin et al. for

Ciurpita et al.'s apparatus because Irvin et al. recognizes predetermined patterns such

as area codes, exchange codes, or country codes in a telephone number, according to

their position within the number, in order to look them up in a look-up table and

determine their corresponding geographical location (Paragraph [0021], lines 10-13).

As per claim 45, Ciurpita et al., as modified by Irvin et al., teach an apparatus

according to claim 43 in which the predetermined patterns are predetermined digit

sequences occurring at the commencement of the representation (Irvin's paragraph [0021], lines 8-14. It is inherent in the predetermined pattern for the area code that the sequence occurs at the commencement of the representation.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of the predetermined patterns are predetermined digit sequences occurring at the commencement of the representation as taught by Irvin et al. for Ciurpita et al.'s apparatus because Irvin et al. recognizes predetermined patterns such as area codes, exchange codes, or country codes in a telephone number, according to their position within the number, in order to look them up in a look-up table and determine their corresponding geographical location (Irvin's Paragraph [0021], lines 10-13).

As per claim 46, Ciurpita et al., as modified by Irvin et al., teach an apparatus according to claim 45 for recognising telephone numbers, in which the coded representation is a representation of numeric digits (Ciurpita's paragraph [0019], lines 9-12).

22.   Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ciurpita et al. (US 2003/0023439) in view of Irvin et al. (US 2002/0072917) as applied to claim 45 above, and further in view of Burnett (Reusable Dialog Requirements for Voice Markup Language -2000).

As per claim 47, Ciurpita et al., as modified by Irvin et al., teach an apparatus according to claim 45, but do not specifically mention in which the remainder of the coded representation is divided into portions such that each such portion shall not exceed a predetermined length.

However, Burnett teaches

the remainder of the coded representation is divided into portions such that each such portion shall not exceed a predetermined length (Page 8, Section 3.3.3., lines 1-6, more specifically listing number 3. Also Page 12, Section 3.4.6., lines 1-9, more specifically second bullet "Allows the number of digits in each section to be configured").

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of the remainder of the coded representation is divided into portions such that each such portion shall not exceed a predetermined length as taught by Burnett for Ciurpita et al.'s apparatus, as modified by Irvin et al. because recognizing digit strings consisting of sections and identifying the number of digits in each section provides for a better match with a constrained list, a regular expression and/or a database query, in order to be capable to return an N-best list of recognized digits strings with this application-level filtering or restriction applied. (Page 13, Section 3.4.6., lines 1-4, and Page 12, Section 3.4.6., lines 12-13).

23.   Claims 51-52 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ciurpita et al. (US 2003/0023439) in view of Doyle (US Patent 7,103,542).

As per claim 51, Ciurpita et al. teach an automated dialogue apparatus comprising:

speech recognition means operable to recognise speech received from a

speaker and generate a coded representation thereof (Paragraph [0019], lines 4-12);

and

timeout means operable to determine in accordance with a silence duration

parameter when an utterance being recognised is deemed to have ended (Paragraph

[0019], lines 4-6, and paragraph [0084], lines 1-5).

However, Ciurpita et al. do not specifically mention

characterised by means operable, during an utterance, in dependence on the

contents of the utterance to date, to vary the timeout parameter for the continuation of

that utterance.

Conversely, Doyle teach

characterised by means operable, during an utterance, in dependence on the

contents of the utterance to date, to vary the timeout parameter for the continuation of

that utterance (Col. 19, lines 50-58).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have used the feature of characterised by means operable,

during an utterance, in dependence on the contents of the utterance to date, to vary the

timeout parameter for the continuation of that utterance as taught by Doyle for Ciurpita

et al.'s apparatus because additional noise recorded at the beginning of a user

utterance due to an improper timeout threshold, or at its end, due to an improper end-of-

speech threshold, reduces recognition efficiency and accuracy (Doyle's Col. 19, lines

47-50).

As per claim 52, Ciurpita et al. in view of Doyle teach an automated dialogue apparatus according to claim 51 in which said variation is conditional upon the initial part of the utterance matching a predetermined pattern (Doyle's Col. 19, lines 50-58, where the predetermined pattern is the level of noise detected in one or more user utterances).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the feature of said variation is conditional upon the initial part of the utterance matching a predetermined pattern as taught by Doyle for Ciurpita et al.'s apparatus because additional noise recorded at the beginning of a user utterance due to an improper timeout threshold, or at its end, due to an improper end-of-speech threshold, reduces recognition efficiency and accuracy (Doyle's Col. 19, lines 47-50).

As per claim 54, Ciurpita et al. teach an automated dialogue apparatus comprising:

speech recognition means operable to recognise speech received from a speaker and generate a coded representation thereof (Paragraph [0019], lines 4-12); and

timeout means operable to determine in accordance with a silence duration parameter when an utterance being recognised is deemed to have ended (Paragraph [0019], lines 4-6, and paragraph [0084], lines 1-5).

However, Ciurpita et al. do not specifically mention

characterised by means operable in dependence on a dialogue state to vary the

timeout parameter.

Conversely, Doyle teaches

characterised by means operable in dependence on a dialogue state to vary the

timeout parameter (Col. 19, lines 50-58, it is inherent that the system needs to be in a

state of receiving input for the timeout parameter to be in effect.).

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to have used the feature of characterised by means operable,

during an utterance, in dependence on the contents of the utterance to date, to vary the

timeout parameter for the continuation of that utterance as taught by Doyle for Ciurpita

et al.'s apparatus because additional noise recorded at the beginning of a user

utterance due to an improper timeout threshold, or at its end, due to an improper end-of-

speech threshold, reduces recognition efficiency and accuracy (Doyle's Col. 19, lines

47-50).

Allowable Subject Matter

24.   Claims 31-34 and 53 are allowed.

25.   Claims 14 and 18 would be allowable if written to overcome the 35 U.S.C. 112

rejections.

26.   Claim 50 would be allowable if written to overcome the 35 U.S.C. 101 rejection.

Regarding claim 14, there is no prior art reference, alone or in combination, that specifically teaches or suggests the limitation of "the alignment having the similarity measure indicative of the greatest similarity is an alignment corresponding to a pure continuation of the part of the buffer contents already uttered by the speech generation means, to enter the coded response into the buffer at such position and to mark the position within the buffer at which such entry began."

Regarding claim 18, there is no prior art reference, alone or in combination, that specifically teaches or suggests the limitation of "comparing a part of the updated representation immediately following the marked position with a part immediately preceding the same marked position to determine whether or not said immediately following part can be interpreted as a correction or partial correction of said immediately preceding part."

Prior art made of record, Ciurpita et al. (US 2003/0023439), teach updating a previous coded representation by concatenation of at least part thereof with this recognized coded representation (Paragraph [0072], lines 3-4); and marking the position within the updated representation at which said concatenation occurred (Paragraph [0072], lines 7-8, it is inherent in the "un-concatenating" process that the position where the concatenation occurred is known.). However, Ciurpita differs from applicant's claimed invention in that it does not perform any comparisons between the stored buffer contents and the new recognition results; instead, they provide the results

as feedback to the user and await confirmation or rejection accordingly. If results are

rejected, the system awaits for a new input from user.

Regarding claim 31, there is no prior art reference, alone or in combination, that

specifically teaches or suggests the limitation of "performing a comparison process

having a plurality of comparison steps, wherein each comparison step comprises

comparing a first comparison sequence (each of which comprises a unit or leading

portion thereof) with a second comparison sequence which, in the stored sequence,

immediately precedes the first comparison sequence, so as to determine whether the

first and second comparison sequences meet a predetermined criterion of similarity; in

the event that the comparison process identifies only one instance of first and second

comparison sequence of that instance from the stored sequence."

Regarding claim 32, there is no prior art reference, alone or in combination, that

specifically teaches or suggests the limitation of "in response to a parameter which

defines an expected length for the stored sequence, the step of comparing the actual

length of the stored sequence with the parameter and in the event that the actual length

exceeds the parameter: performing a comparison process having a plurality of

comparison steps, wherein each comparison step comprises comparing a first

comparison sequence (each of which comprises a unit or leading portion thereof) with a

second comparison sequence, so as to determine whether the first and second

comparison sequences meet a predetermined criterion of similarity; in the event that

the comparison process identifies only one instance where both (i) the length of the second comparison sequence is equal to the difference between the actual and expected length and (ii) the first and second comparison sequences meet the criterion, deleting the second comparison sequence of that instance from the stored sequence."

Regarding claim 34, there is no prior art reference, alone or in combination, that specifically teaches or suggests the limitation of "updating the stored coded representation on the basis of the recognized response; wherein said updating includes updating at least one part of the stored coded representation other than the selected portion."

Regarding claim 50, there is no prior art reference, alone or in combination, that specifically teaches or suggests the limitation of "storing coded representations including markers indicative of points of ambiguity; comparing, for each of a plurality of different alignments thereof, a part of the coded representations immediately following a marked point with a part immediately preceding the same marked point to determine whether or not said immediately following part can be interpreted as a correction or partial correction of said immediately preceding part; wherein at least some of said comparisons involve comparing only a leading portion of said immediately following part with said immediately preceding part."

Regarding claim 53, there is no prior art reference, alone or in combination, that specifically teaches or suggests the limitation of "said variation is conditional upon recognition in the utterance of input indicative of negative confirmation to increase the timeout parameter for the remainder of that utterance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie Lennox whose telephone number is (571) 270-1649. The examiner can normally be reached on Monday to Friday 9:30 am - 7 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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NL   02/19/2008

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